

# Trinski's Island Wetland Restoration Project

## Preliminary Project Design Elements and Descriptions of Proposed Habitat Enhancement Alternatives

**Bioengineered Perimeter Berm** – Trinski's Island will be created using a unique, bioengineered approach. The core element to the perimeter berm is the HESCO Bastion Concertainer®, a wire mesh and non-woven fabric modular containment system (See Appendix A). The containment system will be filled with mechanically excavated sediments. The exterior (lake side) of the containment system will be protected by gradation 4 rip-rap at a 3:1 slope, while the interior will be stabilized with mechanically excavated sediment and sand. Non-woven geotextile fabric will be used as an underlayment along the entire system. Once the entire perimeter berm has been installed, sediments will be placed within the interior of the island using hydraulically and/or mechanically dredged sediment. The interior height of the sediment is proposed to match the normal summer pool elevation 737.3 MSL. Wetland plantings will be installed once the interior sediment fill placed within the island reaches a stable condition that generally conforms to the normal summer pool elevation.

**Habitat Indentations** - The creation of multiple indentations along the western edge of the island perimeter will provide ideal locations for the placement of rootwads, fallen trees, woody debris, lunger structures, etc. These woody elements will be “keyed” into the island perimeter to ensure their stability. The indentations will also protect the structures, and provide an attractive habitat for fish, macroinvertebrates and shorebirds.

**Vertical Woody Debris Perch** - It has been expressed that the Chain O Lakes has a lack of suitable nesting and perching habitat for large birds of prey such as the Osprey. Ospreys tend to build large nests near water, on top of dead trees or artificial structures that are similar to dead trees, such as utility poles. Nests can be used for numerous years and continue to grow in size, eventually becoming a very large and significant fixture of the landscape. Vertical woody debris perches will be constructed with a combination of cultural material (utility poles) and other large woody debris collected by the FWA. Dead trees will be incorporated into the vertical perch design in order to create an inexpensive way to beneficially reuse excess woody debris.

**Cobble Spawning Bed** - A large area of rounded cobble-sized gravel will be placed along the east side of the island within close proximity to the deep water refugia pool (see below). This habitat enhancement will provide a coarse substrate that extends approximately 50-75 feet outward from the toe of the island perimeter. This substrate will provide ideal spawning habitat for numerous species of recreational game fish and many non-game species important to the health of the Chain O Lakes fishery.

**Deep Water Refugia** - The creation of a deep water pool will provide multiple species of fish refugia habitat during winter and early spring, prior to ice out on the Chain O Lakes. This habitat feature will be excavated to a minimum of 8 to 10 feet deep (at normal summer pool). This type of habitat is not common within the Chain O Lakes and will

provide ideal over-wintering conditions for multiple species of sport fish important to the recreational fishery of the Chain O Lakes.

**Waterfowl Nesting Mounds** – Nesting mounds will be constructed within the island using sand excavated from the deepwater water refugia to an elevation ranging from one to two feet above normal summer pool. Suitable nesting habitat is extremely important, as much has been lost as a result of development throughout the Chain O’ Lakes. Many rare, threatened and endangered species require isolated habitat to reproduce naturally. Additionally, visitors may have a rare chance to observe nesting by numerous wading birds.

**Rootwads & Large Woody Debris Structures** - Rootwads and large woody debris structures represent another beneficial reuse option for floating debris collected by FWA. Trinski’s Island will provide the FWA an opportunity to locally reuse the material instead of hauling it away. Rootwads will effectively increase habitat complexity and structural diversity along the perimeter berm. Large woody debris creates ideal substrate for primary production. The diversity of the structure will also provide optimal cover for juvenile fish to escape predation and may also provide over-wintering habitat as well.

**ADA Compliant Access Dock** – As part of the Informational and Educational components of the Trinski’s Island Project, FWA will construct an ADA compliant access dock within the mooring cove. The dock will provide access for up to four boats, while allowing those with disabilities to access the site. Informational signage will also be placed in strategic locations to inform the public of the beneficial reuses of dredged sediment and large woody debris.

**Interpretive Boardwalk** – An interpretive boardwalk and educational signage will be established within the interior of the island. The boardwalk will provide access to the interior of the island allowing visitors an upfront view of how dredged sediments can be beneficially recovered to create wetland habitat. Additionally, the boardwalk will provide access to the observation deck in the southwest corner of the island.

**Observation Deck** – A unique and keystone structure of the Trinski’s Island Restoration will be the multi-level observation deck located at the southwestern corner of the island. This deck will allow a “bird’s eye” view of the island and allow FWA to showcase the fruits of beneficial reuse of dredged sediment. Observers will see unique complexes of wetland plants and other wetland wildlife. The observation deck will also allow visitors a rare chance to observe unique concentrations of wildlife not normally seen by users of the Chain O Lakes. The lower level of the deck will also include an ADA compliant ramp making it accessible to those with disabilities as well.